Unique Identification (UID) of Tangible Items

Overview

DoD Vision for Item Marking

- To create a policy establishing a strategic imperative for uniquely identifying tangible items relying to the maximum extent practical on international standards and commercial item markings.
- Uniquely identified (UID) tangible items will facilitate item tracking in DoD business systems and provide reliable and accurate data for management, financial, accountability and asset management purposes.

Strategic Purpose of UID is to…

- Integrate item data across government and industry asset management systems, resulting in:
  - Improved data quality and global interoperability
  - Rationalization of systems and infrastructure
- Improve item management and accountability
- Improve asset visibility and life-cycle management through life cycle traceability
- Enable more accurate audit opinions on the property, plant, and equipment and operating materials and supplies portions of financial statements

DoD's Approach to UID

- The Department of Defense (DoD) established a joint international/industry/government Integrated Product Team (IPT) to achieve the following goals:
  - Identify the UID data standard and business rules
  - Develop a feasible and rapid implementation strategy
- The IPT consists of four simultaneous efforts:
  - Policy
  - Standards
  - Implementation
  - DFARS Cases

What is Unique **ID**entification **(UID)?**

UID is . . .

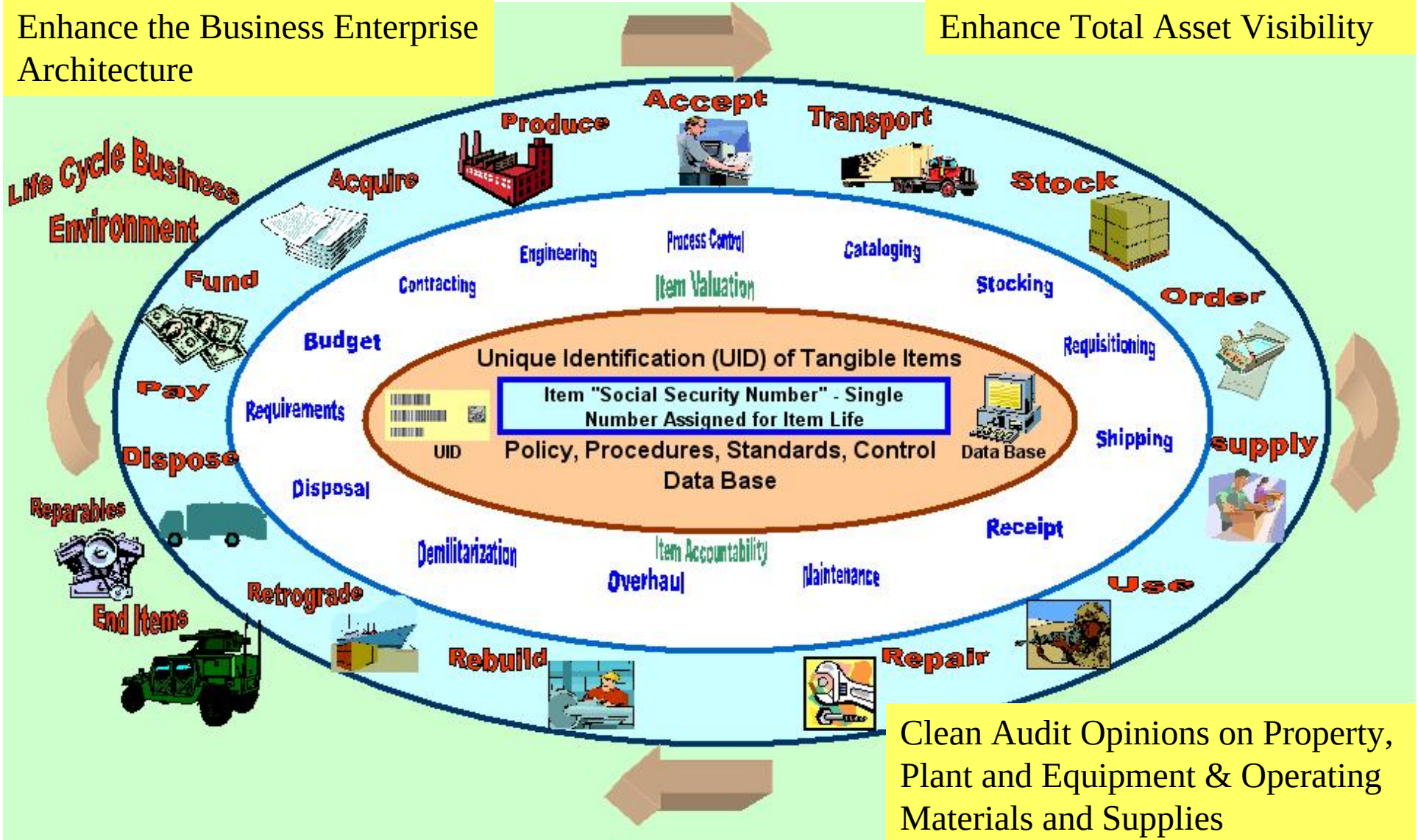
. . . the set of data for tangible assets that is globally unique and unambiguous, ensures data integrity and data quality throughout life, and supports multi-faceted business applications and users.

EID	194532636	
Original Part Number	1234	
Serial Number	786950	

UID Role - Business Enterprise Architecture

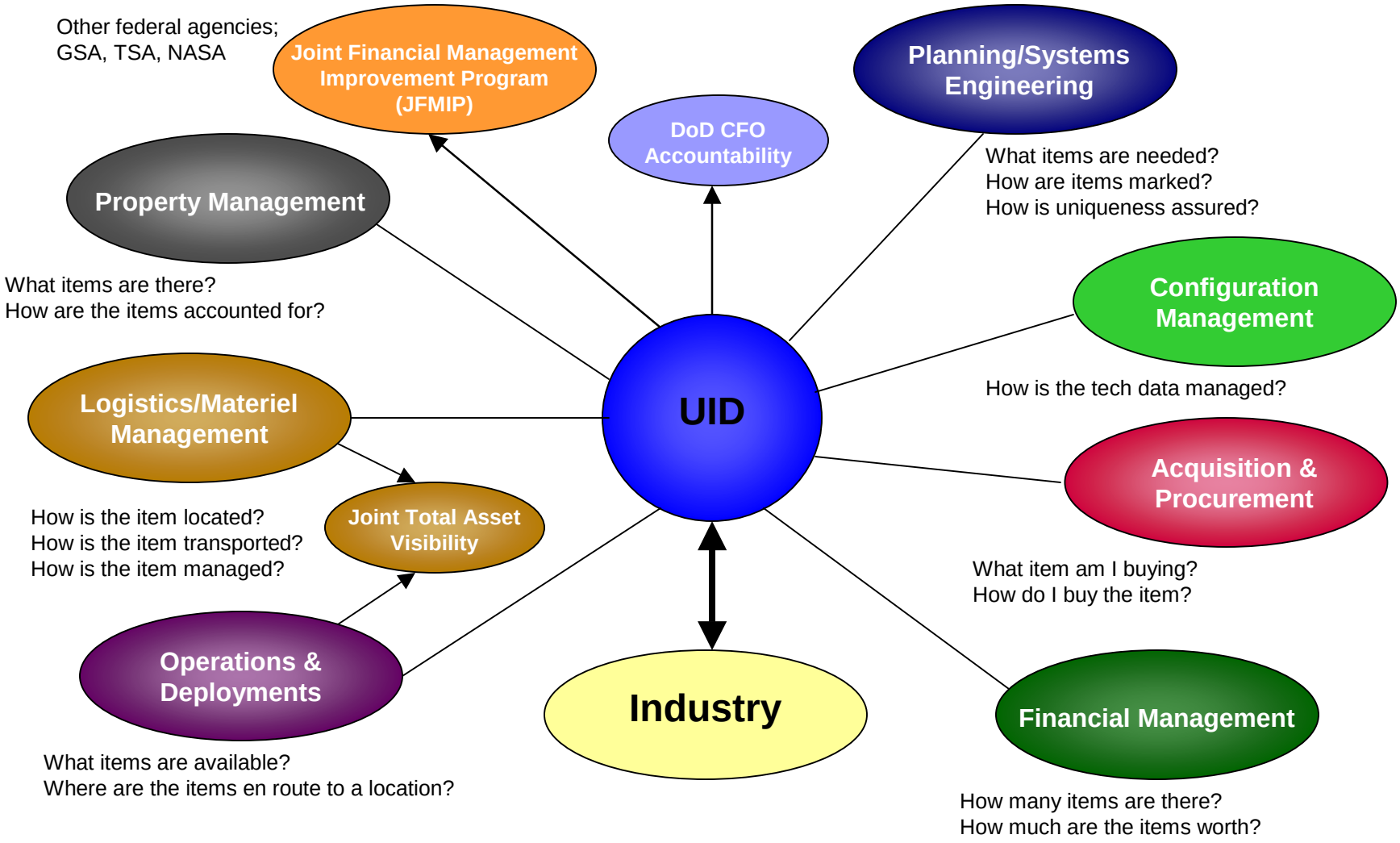
Enhance the Business Enterprise Architecture

Enhance Total Asset Visibility



Clean Audit Opinions on Property, Plant and Equipment & Operating Materials and Supplies

UID Interfaces

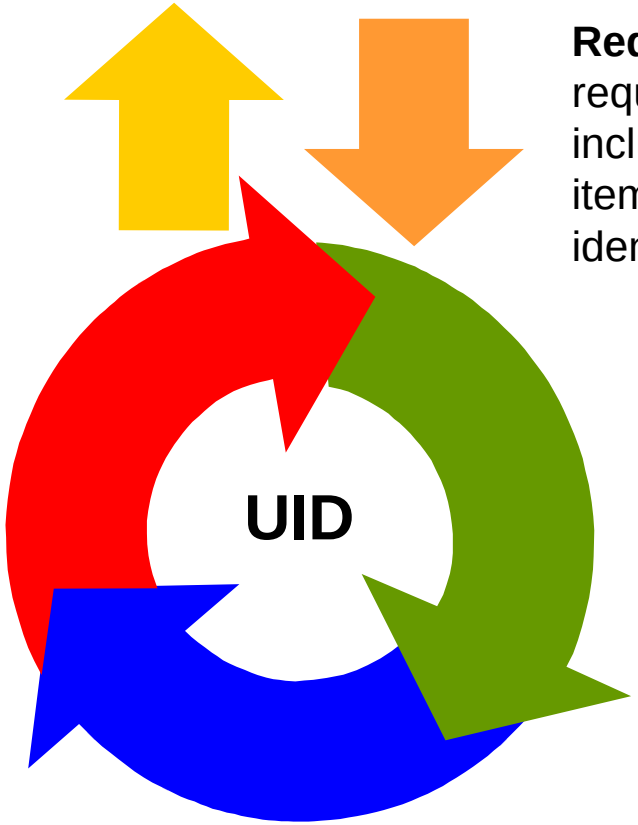


UID Lifecycle

What is the UID Lifecycle?

Dispose – DoD/GSA records the "termination" of the UID at time of item disposal

Require – DoD contracts reflect the requirement for part marks to include UID data elements for all items which require unique identification

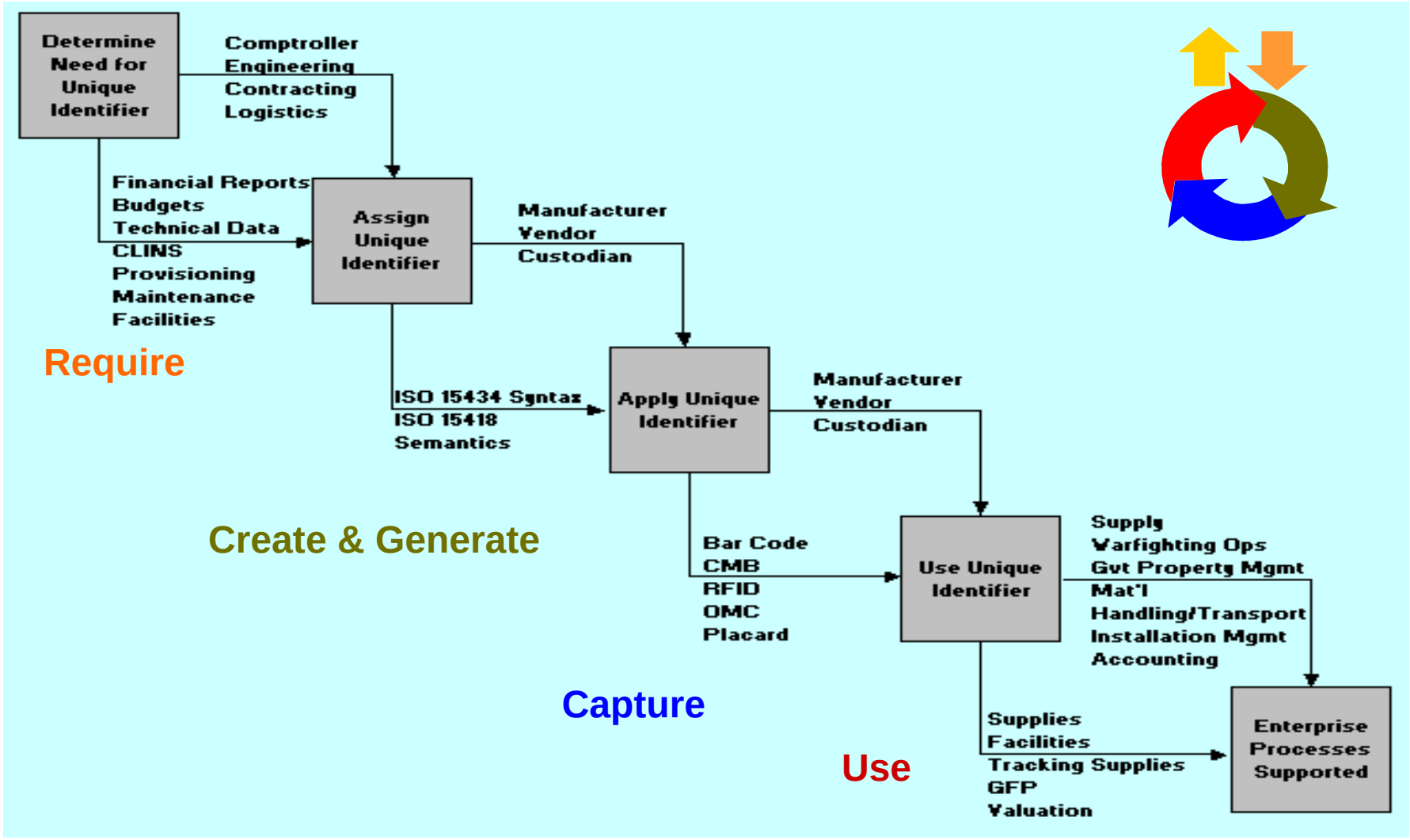


Use – Functional stakeholders use UID as a primary or alternate key in the AIS to access or update item information based on its UID

Create/Generate – Industry suppliers/manufacturers throughout supply chain assign and apply UID data elements and ensure the uniqueness of the component data elements

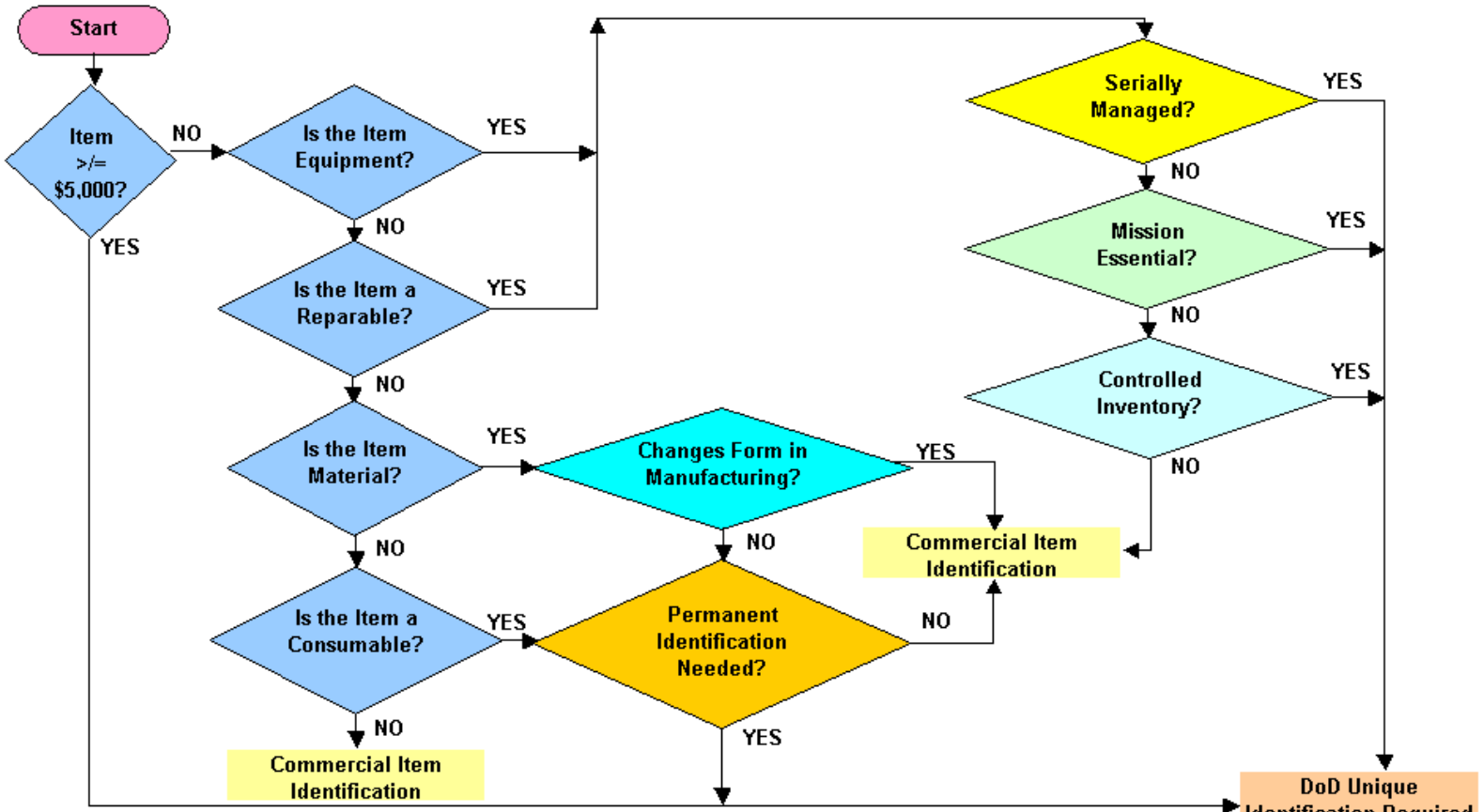
Capture – DoD establishes the "birth" record of the UID by capturing the machine/human readable component data elements to create the UID in the AIT/AIS

UID Lifecycle & Interface Flow



Require the UID

Which Items Require a Unique Identifier (UID)?



Commercial item identification examples are the Universal Product Code and Health Industry Bar Code

Require the UID

- All program managers for new equipment, major modifications, and reprocurements of equipment and spares shall begin planning to apply Unique Identification (UID) on tangible items
- UID is a mandatory DoD requirement for all solicitations issued on or after January 1, 2004
- Specific guidance related to UID requirements can be found by referring to the following sources:
  - DFARS (under revision to include UID)
  - DoD Guide to Unique Identification of Tangible Items
  - Coordinated Policy Guidance
  - www.acq.osd.mil/uid

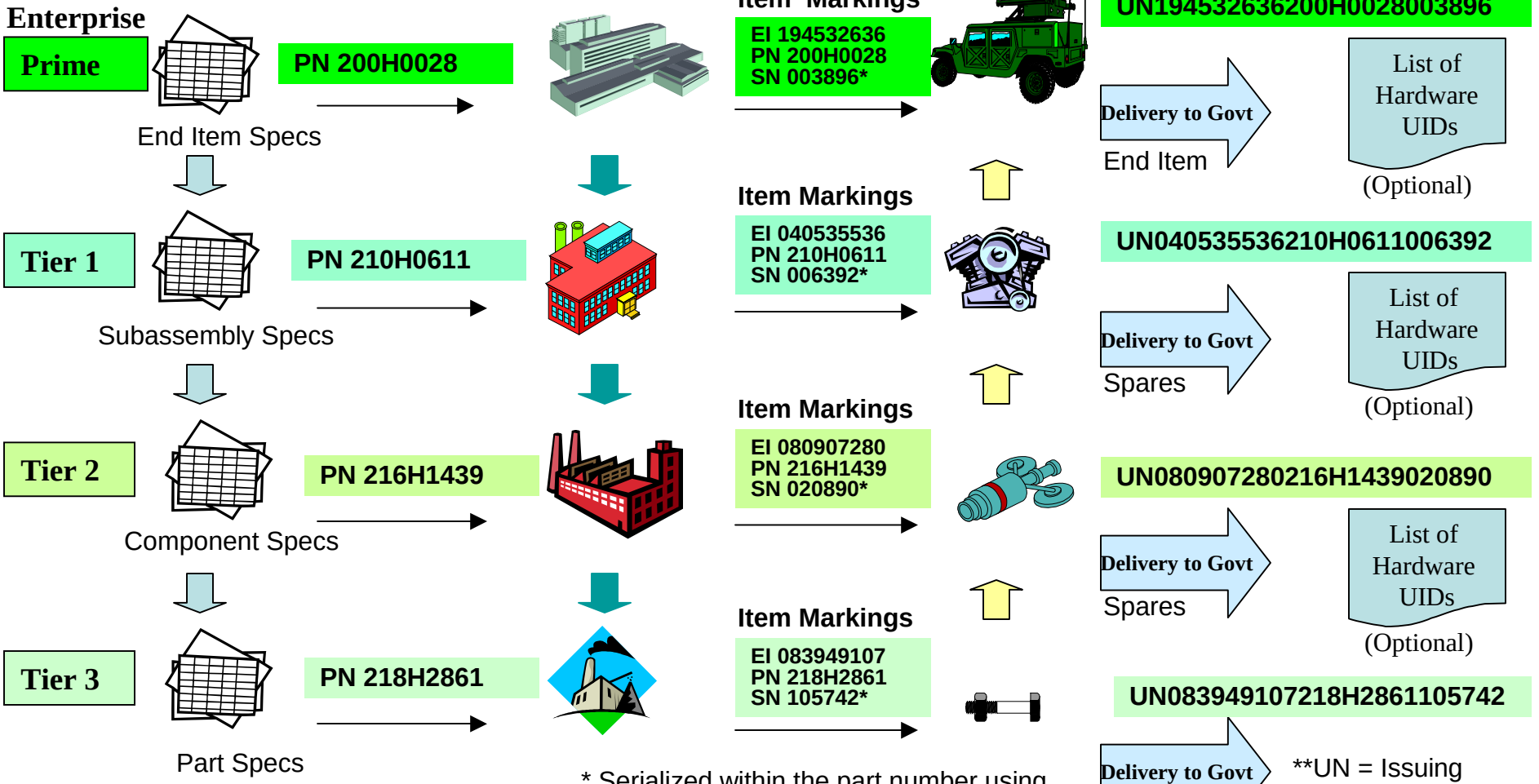
Create and Generate the UID

The components that make up the UID are identified in the table below. Each enterprise has two options for creating the UID.

	UID Construct #1	UID Construct #2
Based on current enterprise configurations	If items are serialized within the Enterprise	If items are serialized within Part Number
UID is derived by concatenating the data elements IN ORDER:	Issuing Agency Code* Enterprise ID Serial Number	Issuing Agency Code* Enterprise ID Original Part Number Serial Number
Data Identified on Assets Not Part of the UID (Separate Identifier)	Current Part Number	Current Part Number

*The Issuing Agency Code (IAC) represents the registration authority that issued the enterprise identifier (e.g., Dun and Bradstreet, EAN.UCC). The IAC can be derived from the data qualifier for the enterprise identifier and does not need to be marked on the item.

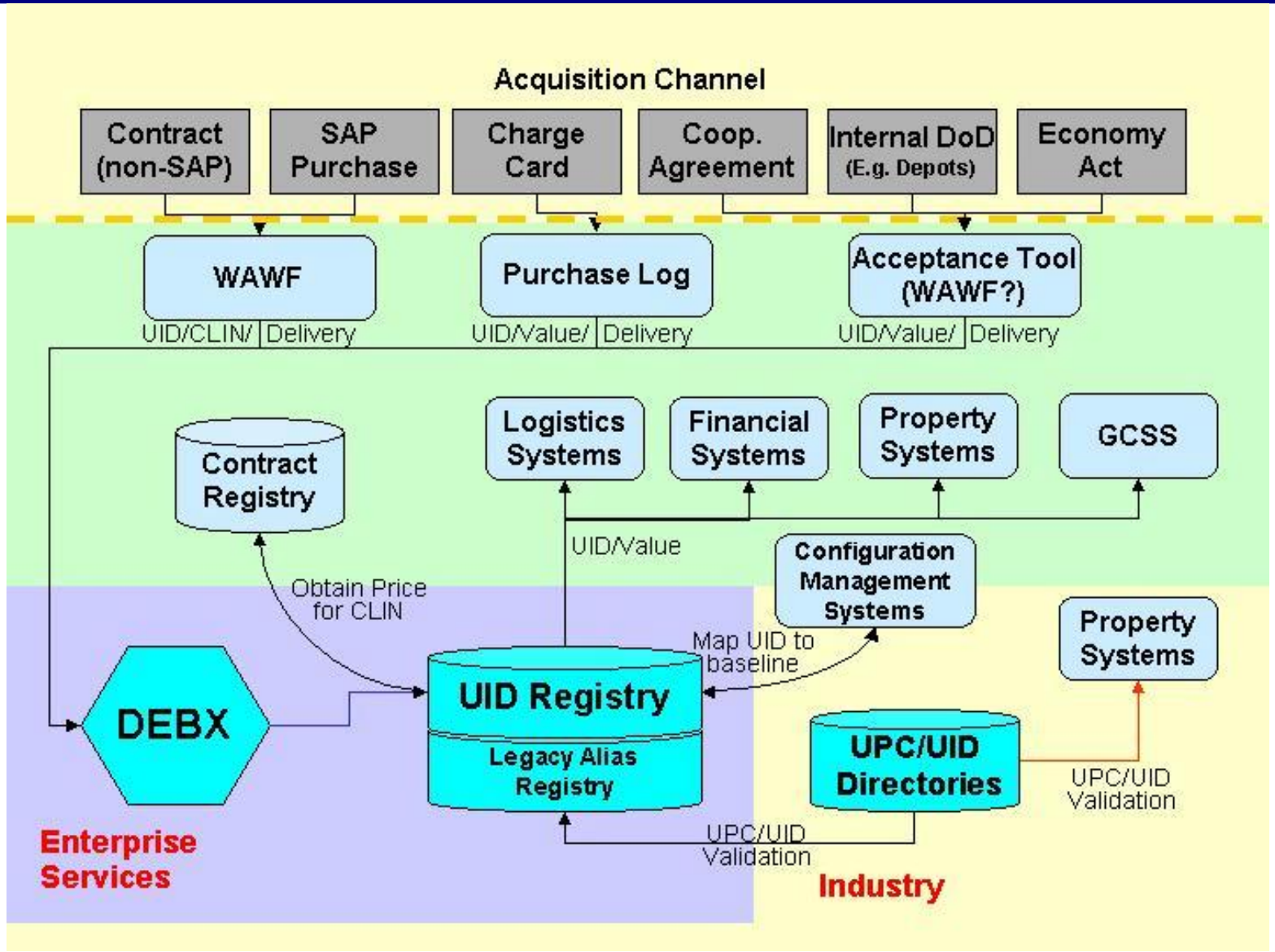
UID in the Supply Chain



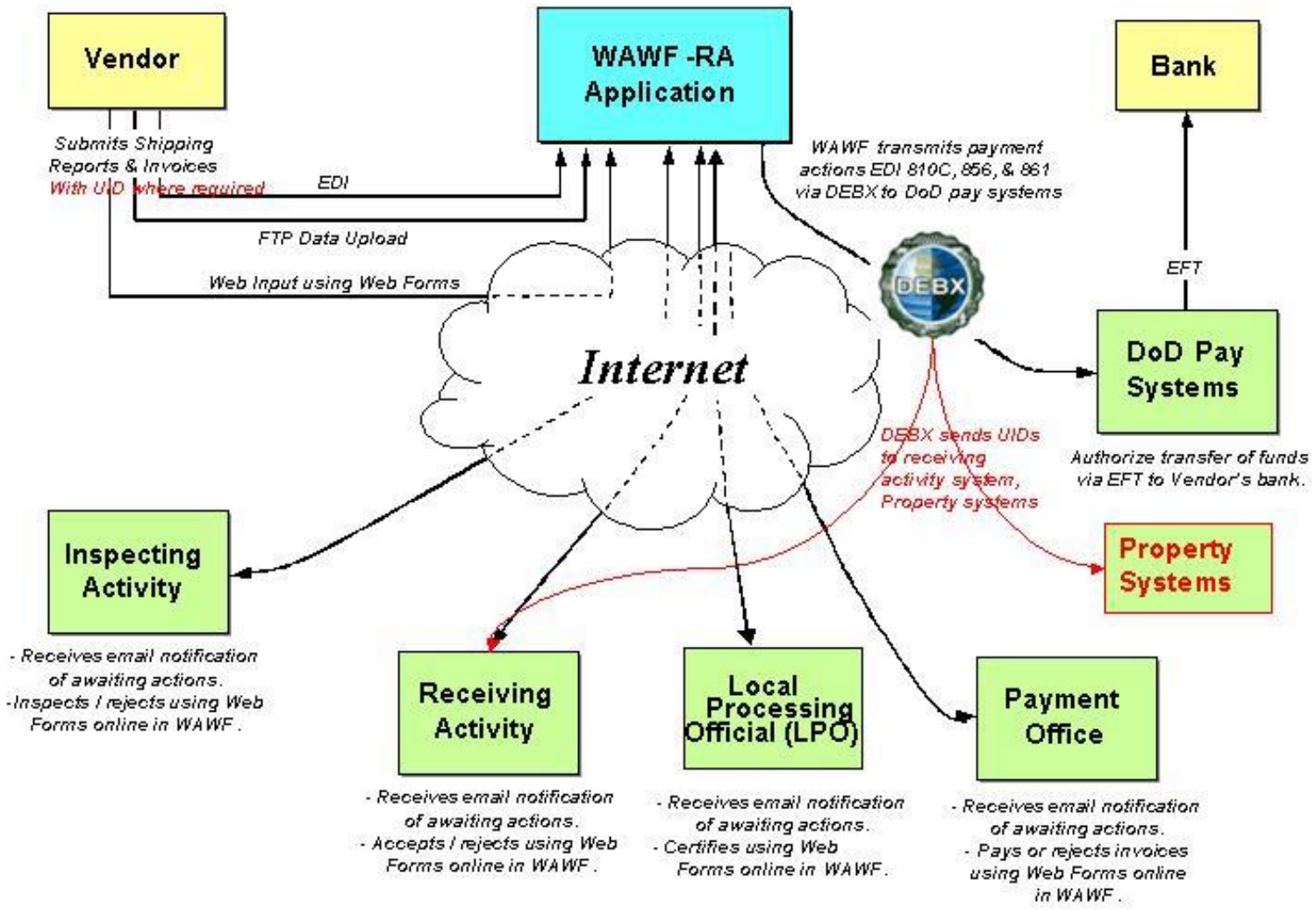
UID = Unique Identifier; EI = Enterprise Identifier
PN = Part Number; SN = Serial Number

* Serialized within the part number using DUNS

Capture the UID

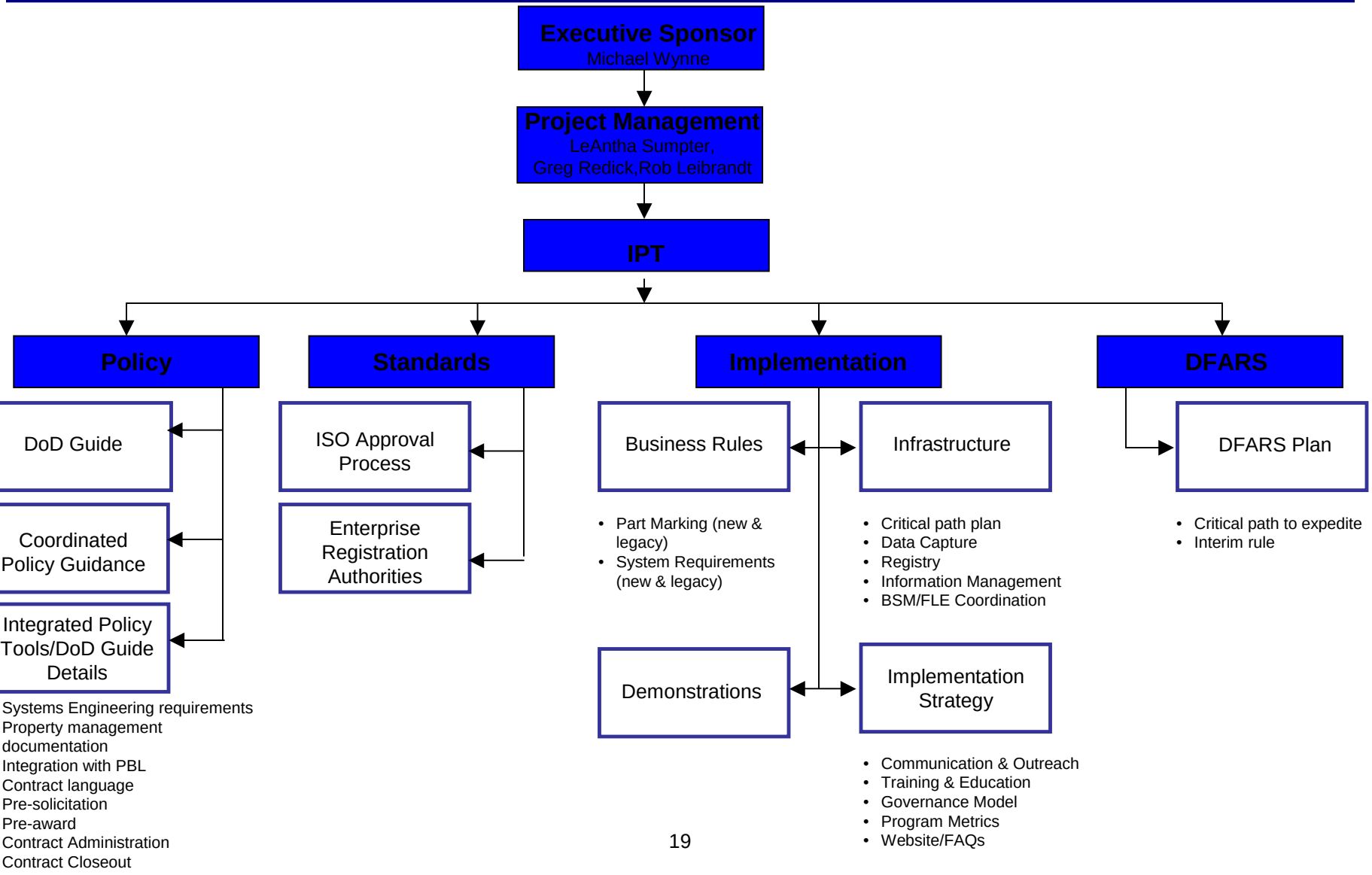


Capturing and Initiating UID Use



UID Organization & Efforts-to-Date

Current Organizational Structure



Policy Effort

The Policy efforts-to-date have included:

- Publishing the July policy and policy forecast memos
- Identifying and completing coordinated guidance
- Finalizing the first version of the Unique Identification Guidance (UID Guide) for implementing UID

DFARS Effort

The DFARS Cases efforts-to-date have included:

- The public hearing was held on May 28, 2003
- Responding to comments made during the hearings
- Developing a final draft rule to submit to DAR Council

Standards Team

The Standards Team efforts-to-date have included:

- Establishing the UID Constructs #1 and #2
- Identifying the collaborative solution
- Adding the necessary semantics to all three data standards to support the elements of the UID

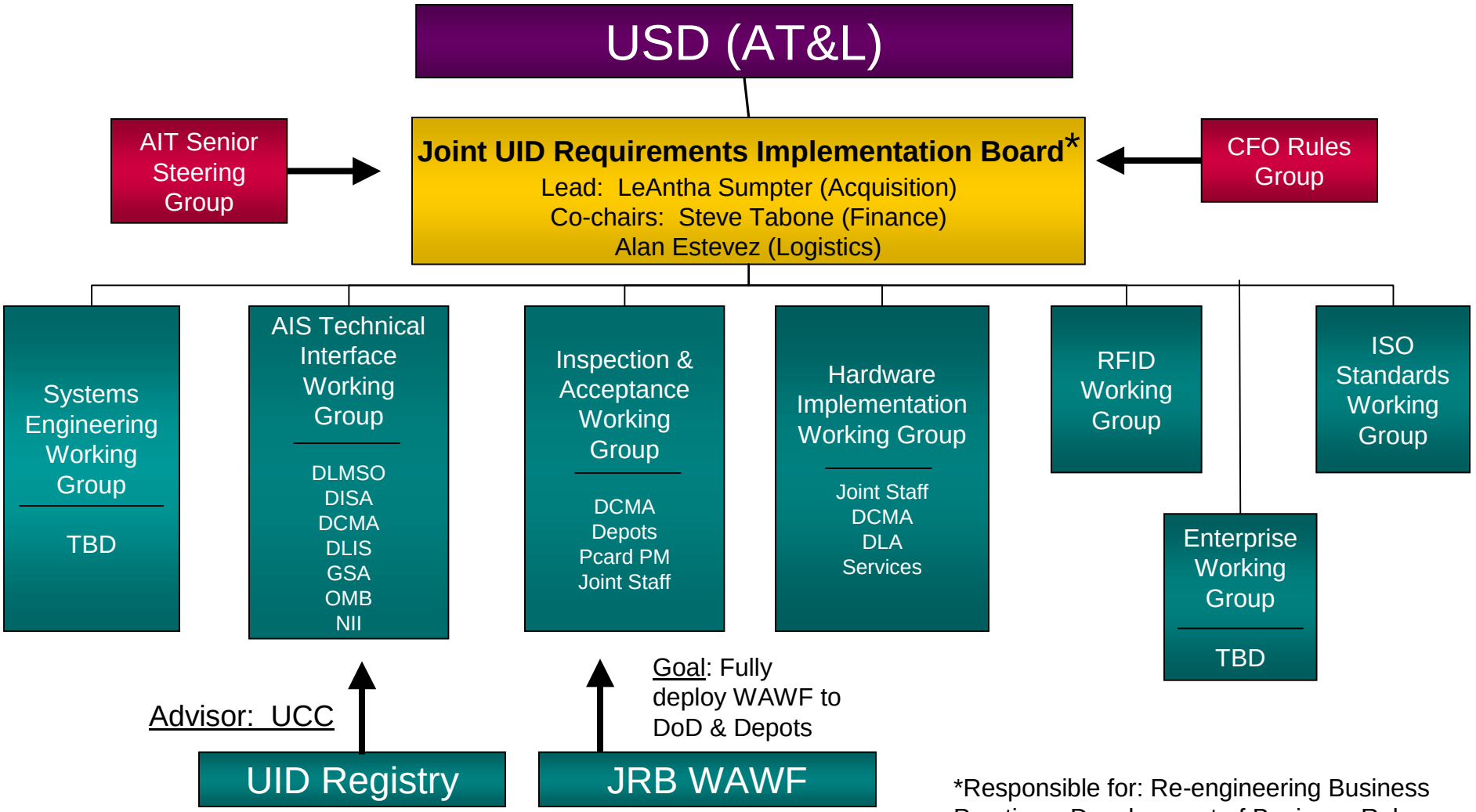
Implementation Team

The Implementation Team efforts-to-date have included:

- Developing an AIS infrastructure plan to accommodate the UID
- Creating a DRAFT communications strategy
- Finalizing the UID business rules for marking, conformance, and data capture
- Reviewing existing serial number tracking and UID-related implementation programs to develop best practices for UID

Next Steps

Future Organizational Structure



*Responsible for: Re-engineering Business Practices, Development of Business Rules, Recommending Pilot Programs/Projects

What's Next

- Charter Joint Requirements Implementation Board
- Support RFID policy development
- Develop tool kit for program managers
- Develop a second DFAR case for Government Furnished Equipment and UIDs
- Determine AIS and infrastructure requirements; continue working implementation solutions for existing programs
- Secure funds to modify and fully deploy Wide Area Workflow

Contact Information

For further information or questions, please contact:

- Ms. LeAntha Sumpter at LeAntha.Sumpter@osd.mil or at (703) 681-7564
- Mr. Robert Leibrandt at Robert.Leibrandt@osd.mil or at (703) 695-1099

A variety of UID background materials and previous UID policy memos can be found at

www.uniqueid.org

Note: For inquiries regarding the standards effort, please contact Lt Col Gregory Redick at gregory.redick@dcma.mil

Session Overview

Session Overview

- Briefing by the Business Enterprise Architecture Team to explain the importance of UID from an architecture perspective
- Briefing by the Defense Medical Logistics Standard Support (DMLSS) on using UID in the medical community

LUNCH

- Automatic Identification Technology (AIT) Capabilities Demonstrations
- Break Out Session Briefings/Discussions

Break Out Session Briefings

Time	Session Name	Speaker	Room
1:00 to 2:25	UID Overview – Logistics	Kathy Smith, Jay Berry, Col D.C. Pipp	A
1:00 to 2:25	UID Overview – Acquisition/Finance	Rob Leibrandt, Mike Canales, Tom Ruckdaschel, Nelson Cahill	B
1:00 to 2:25	Business Rules	Frank Goodell (AIA) and Dan Kimball (AIT)	C
2:45 to 4:10	UID-Related Efforts in the Services	Col. Loraine Simard (AF), Linda Barnwell (AF), Mike Breckon (Navy), Dan Kimball (AIT), Carl Gardner (AIT)	A
2:45 to 4:10	AIS Issues and Opportunities	Bruce Propert, Jeff Ricker (Izar), Pete Alvarez (UCC)	B
2:45 to 4:10	UID Next Steps – Legacy Programs	Mitch Kaarlela (JSF) and Chris Sautter (CH-47)	C

Backups

Create and Generate the UID

- Data qualifiers (semantics) will define each machine-readable data element marked on the item.
- The data qualifier associated with the serial number will identify which UID construct is used to build the UID.

Semantics Translation Between Data Identifiers (DI), Application Identifiers (AI), and Text Element Identifiers (TEI)[1]

Enterprise ID	DI	AI	TEI
CAGE/NCAGE	17V		CAG
DUNS	12V		DUN
EAN.UCC			EUC
Serial No. w/in Enterprise Identifier	18S	8004	SER
Serial No. w/in Original Part No.	S	21	SEQ
Original Part No.	1P	01	PNO
Current Part No.	30P	240	PNR

1 Blank boxes indicate the need for updates to the standards.

Capture the UID

- For activities after initial delivery, in support of the product life cycle, any entity that collects data about the item must be capable of associating the data with the UID in accordance with the program requirements.
- Using the syntax and the semantics translation table on the prior slide, software that resides either in the AIT device or the AIS can translate between the three approved, interoperable formats

Formats:

TEI: (Format has to be assigned by SC 31, all 2-digit numbers used or reserved)

[)>$^{R}_{S}$*DD*$^{G}_{S}$DUN194532636$^{G}_{S}$PNO1234$^{G}_{S}$SEQ786950^{E}O$_{T}$

EAN.UCC: Application Identifiers

[)>$^{R}_{S}$05$^{G}_{S}$*TBD*194532636$^{G}_{S}$011234$^{G}_{S}$21786950^{E}O$_{T}$

MH 10.8.2: Data Identifiers

[)>$^{R}_{S}$06$^{G}_{S}$12V194532636$^{G}_{S}$1P1234$^{G}_{S}$S786950^{E}O$_{T}$

Capture the UID

BUSINESS RULES

- When constructing the UID:
  - Spaces will be deleted
  - Special characters will be deleted from the enterprise identifier
  - Special characters will not be deleted from the part number or serial number

UID Construct #1[1]

EID **12V194532636**

Serial No. **18S786950**

UID Construct #2[1]

EID **12V194532636**

Orig. Part No. **1P1234**

Serial No. **18S786950**

Current Part No. 30P5678

UID Construct #1
UN194532636786950

IAC EID Serial No.

UID Construct #2
UN1945326361234786950

IAC EID Orig. Part No. Serial No.

[1] This example uses MH10.8.2 Data Identifiers.

Capture the UID

BUSINESS RULES

- In a database, once the UID is derived, it shall not be parsed to determine the original elements[1]

EID	**12V194532636**
Orig. Part No.	**1P1234**
Serial No.	**18S786950**
Current Part No.	**30P5678**

Record ID	UID (Constructed with a Business Rule)	EID	Orig. Part No.	Serial No.	Current Part No.	"Other Data"…
	UN1945326361234786950	194532636	1234	786950	5678	à à à

Incremental ***Never Changes*** ***(mandatory for audit)*** ***Can Change***

[1] This example uses MH10.8.2 Data Identifiers.

Create and Generate the UID

BUSINESS RULES

- The UID shall be derived from its discrete component data elements. The UID is not required to be marked on the item as a separate data element.[1]

UID Construct #1[2]

EID **12V194532636**

Serial No. **18S786950**

UID Construct #2[2]

EID **12V194532636**

Orig. Part No. **1P1234**

Serial No. **18S786950**

[1]If the enterprise chooses to mark the UID as a discrete data element on the item, the component data elements must also be marked on the item as discrete data elements, in addition to the UID.

[2] This example uses MH10.8.2 Data Identifiers.